

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please cancel claim 14 without prejudice or disclaimer.

Please amend claims 1-3 and 8-10 and add new claims 15-21 as follows:

1. (Currently Amended) A spark plug comprising:

a metal shell;

a center electrode retained in said metal shell ~~to be~~ and insulated from said metal shell, said center electrode having a body portion made of a first material and a tip portion made of a second material different from the first material, wherein the tip portion is connected to an end of the body portion by a welding material; and

a ground electrode opposed to said center electrode to define a spark gap between said ground electrode and said center electrode, said ground electrode being joined to said metal shell through a weld fused by one of a laser welding material and an arc welding material.

2. (Currently Amended) A spark plug as set forth in claim 1, wherein the whole of said ground electrode is made of an Iridium alloy and ~~welded~~ connected at an end thereof directly by a welding material to said metal shell.

3. (Currently Amended) A spark plug as set forth in claim 1, wherein a depth of a the weld between said ground electrode and said metal shell ~~lies within a range of~~ is about 0.3 mm to 1.5 mm.

4. (Original) A spark plug as set forth in claim 1, wherein said metal shell is made of an Fe-base alloy containing one of 0.15% by weight or less of S, 0.35% by weight or less of Si, 0.25% by weight or less of C, 1.5% by weight or less of Mn, and 0.1% by weight or less of P.

5. (Original) A spark plug as set forth in claim 1, wherein said metal shell is made of an Fe-base alloy containing 0.15% by weight or less of S, 0.35% by weight or less of Si, 0.25% by weight or less of C, 1.5% by weight or less of Mn, and 0.1% by weight or less of P.

6. (Original) A spark plug as set forth in claim 1, wherein said ground electrode is made of an alloy containing a main component of 50 Wt % or more of Pt and an additive of at least one of Rh, Ir, Os, Ni, W, Pd, and Ru.

7. (Original) A spark plug as set forth in claim 1, wherein said ground electrode is made of an alloy containing a main component of 50 Wt % or more of Ir and an additive of at least one of Rh, Pt, Os, Ni, W, Pd, and Ru.

8. (Currently Amended) A spark plug comprising:

a metal shell;

a center electrode retained in said metal shell ~~to be~~ and insulated from said metal shell, said center electrode having a body portion made of a first material and a tip portion

made of a second material different from the first material, wherein the tip portion is connected to an end of the body portion by a welding material; and

a ground electrode opposed to said center electrode to define a spark gap between said ground electrode and said center electrode, said ground electrode being all made of an Iridium alloy including a main component of 50 Wt% or more of Ir and joined directly to said metal shell.

9. (Currently Amended) A spark plug as set forth in claim 8, wherein said ground electrode is joined to said metal shell by a laser welding material.

10. (Currently Amended) A spark plug as set forth in claim 9, wherein a depth of a the weld between said ground electrode and said metal shell ~~lies within a range of~~ is about 0.3 mm to 1.5 mm.

11. (Original) A spark plug as set forth in claim 8, wherein said metal shell is made of an Fe-base alloy containing one of 0.15% by weight or less of S, 0.35% by weight or less of Si, 0.25% by weight or less of C, 1.5% by weight or less of Mn, and 0.1% by weight or less of P.

12. (Original) A spark plug as set forth in claim 8, wherein said metal shell is made of an Fe-base alloy containing 0.15% by weight or less of S, 0.35% by weight or less of Si, 0.25% by weight or less of C, 1.5% by weight or less of Mn, and 0.1% by weight or less of P.

13. (Original) A spark plug as set forth in claim 8, wherein said ground electrode is made of an alloy containing a main component of 50 Wt % or more of Ir and an additive of at least one of Rh, Pt, Os, Ni, W, Pd, and Ru.

14. (Canceled)

15. (New) A spark plug as set forth in claim 1, wherein the tip portion of the center electrode includes an Ir alloy chip.

16. (New) A spark plug as set forth in claim 15, wherein the body portion is made of a cylindrical member that includes a core portion made of a first metallic material having a higher thermal conductivity than the tip portion, and an external portion made of a second metallic material having higher thermal and corrosion resistance than the tip portion.

17. A spark plug as set forth in claim 1, wherein the tip portion of the center electrode is made of a Pt alloy.

18. (New) A spark plug as set forth in claim 8, wherein the tip portion of the center electrode includes an Ir alloy chip.

19. (New) A spark plug as set forth in claim 18, wherein the body portion is made of a cylindrical member which includes a core portion made of a first metallic material having a higher thermal conductivity than the tip portion and an external portion made of a

second metallic material having higher thermal and corrosion resistance than the tip portion.

20. (New) A spark plug as set forth in claim 8, wherein the tip portion of the center electrode is made of a Pt alloy.

21. (New) A spark plug as set forth in claim 8, wherein the ground electrode is L-shaped.

AMENDMENTS TO THE DRAWINGS

The attached sheet of amended drawings include Figs. 14(a)-14(c). This sheet replaces the original sheet including Figs. 14(a)-14(c).

Attachment: Replacement Sheet